What is claimed is:

1. A method for depositing a material, comprising at least one of: an alloy and a composite, into a recess, defined by an upper and lower surface, the method comprising the steps of:

sputtering from a target, comprised of the material, onto the upper surface to form a layer of deposited material; and

resputtering the layer of deposited material to redeposit onto the lower surface a resputtered layer of material, having a stoichiometry different than that of the layer of deposited material.

2. The method of claim 1, wherein the target is comprised of an alloy or composite material, selected from the group consisting of: refractory metal silicides, magnet alloys, alloys used in micromachining manufacturing processes, and silicide composites.

3. The method of claim 2, wherein the target is comprised of titanium silicide, having a ratio of silicon to titanium between approximately 2.0:1 and 2.7:1.

4. The method of claim 2, wherein the ratio of silicon to titanium in the resputtered layer of material is between approximately 1.0:1 and 2.0:1 and comprises a titanium-rich titanium silicide layer.

5. The method of claim 4, wherein the ratio of silicon to titanium is approximately 1.8:1.

6. The method of claim 4, further comprising the step of annealing the titanium-rich titanium silicide to reduce native oxides and form a low resistivity contact.

7. The method of claim 6, wherein the annealing step comprises using at least one of the following annealing methods: annealing in a furnace at temperatures of approximately 550 to 850 degrees Celsius and rapid thermal processing techniques.

8. The method of claim 1, wherein the recess is a high-aspect ratio contact hole, having a ratio of height-to-spacing of between approximately 3 and 7.

9. The method of claim 1, wherein the sputtering step comprises applying approximately a zero bias at the lower surface of the recess.

10. The method of claim 1, wherein the the resputtering step comprises biasing the bottom surface of the recess to a negative bias voltage, which is less than the lowest threshold energy of any constituent element in the material, at a low grazing angle.

11. The method of claim 10, wherein the bias for the resputtering step is between approximately -15 to -65 Volts low, and the low grazing angle is between approximately 0 and 30 degrees.

12. The method of claim 1, wherein the resputtering step begins after formation of material overhang by the sputtering step.

13. The method of claim 12, wherein the aspect ratio of the recess is 4, and the resputtering step begins approximately 0 to 25 seconds after the sputtering step begins.

14. The method of claim 1, wherein the sputtering step comprises sputtering in a sputtering chamber ambient comprised of argon and nitrogen, having a concentration of between approximately 0.1 to 3.0 percent by volume.

15. The method of claim 1, wherein the resputtering step is followed by deposition of at least one layer of material having a different stoichiometry than that of the layer of resputtered material.

16. The method of claim 1, wherein a negative bias voltage is applied to the substrate and subsequently altered to vary the stoichiometry of the layer of resputtered material.

17. The method of claim 1, wherein the sputtering and resputtering steps comprise utilizing a collimated physical vapor deposition sputtering apparatus.

18. The method of claim 1, wherein the sputtering and resputtering steps comprise utilizing a noncollimated, long-throw physical vapor deposition sputtering apparatus, with a substrate-to-target distance of approximately between 100 to 1,000 millimeters.

19. A method for depositing a material, comprising at least one of: an alloy and a composite, into a recess, defined by an upper and lower surface, the method comprising the steps of:

sputtering from a target, comprised of the material, onto the upper surface to form a layer of deposited material;

resputtering at a first substrate bias, the layer of deposited material to deposit material from the first layer, onto the lower surface, to form a first layer of resputtered material; and

resputtering at a second substrate bias, the layer of deposited material, to redeposit on the first layer of resputtered material, a second layer of resputtered material, having a stoichiometry different than that of the first resputtered material.

20. The method of claim 19, wherein the target is comprised of an alloy or composite material, selected from the group consisting of: refractory metal silicides, magnet alloys, alloys used in micromachining manufacturing processes, and silicide composites.

21. The method of claim 20, wherein the target is comprised of titanium silicide and the ratio of silicon to titanium in the layer of deposited material is approximately 2.0:1, the ratio of silicon to titanium in the first layer of resputtered material is approximately 1.8:1, and the ratio of silicon to titanium in the second layer of resputtered material is approximately 2.0:1.

22. The method of claim 21, further comprising the step of annealing the recess to reduce native oxides and form a low resistivity contact.

23. The method of claim 22, wherein the annealing step comprises using at least one of the following annealing methods: annealing in a furnace at temperatures of approximately 550 to 850 degrees Celsius and rapid thermal processing techniques.

24. The method of claim 19, wherein the target comprises titanium silicide and the ratio of silicon to titanium in the layer of deposited material is approximately greater than 2.0:1, and the ratio of silicon to titanium in the first and second layers of resputtered material is greater than 2.0:1.

25. The method of claim 19, further comprising forming at least a third layer of resputtered material, formed in the same manner as the first and second layers of resputtered material, and having a stoichiometry different than at least the first and second layers of resputtered material.

26. A recess for a semiconductor device, comprising:

a recess bottom, comprised of a first material;

at least one vertical recess sidewall, comprised of a second material; and

a generally planar layer of a third material, selected from the group consisting of alloys and composites and formed on the recess bottom.

27. The recess of claim 26, wherein the third material comprises a first layer of refractory metal silicide and the recess comprises a contact hole.

28. The recess of claim 27, further comprising a second layer of refractory metal silicide, formed on the first layer of refractory metal silicide, wherein the second layer of refractory metal silicide has a different stoichiometry than that of the first layer of refractory metal silicide.

29. The recess of claim 28, further comprising at least a third layer of refractory metal silicide, formed on the second layer of refractory metal silicide, wherein the third layer of refractory metal silicide has a different stoichiometry than that of at least the first and second layers of refractory metal silicide.

30. The recess of claim 26, wherein the first material comprises silicon, and the second material comprises an insulating material, selected from the group comprising oxides, nitrides, and borophosphosilicate glass.